

## KANSAS INVENTORY CONTROL REQUIREMENTS

**K.A.R. 28-44-23 (b) 40 CFR 280.43 as in effect on September 23, 1988 is adopted by reference except for the following changes:**

**280.43 Methods of release detection for tanks.** Each method of release detection for tanks used to meet the requirements of §280.41 must be conducted in accordance with the following:

(e) Inventory control. Product inventory control (or another test of equivalent performance) must be conducted monthly to detect a release of at least 1.0 percent of flow-through plus 130 gallons on a monthly basis in the following manner:

- (1) Inventory volume measurements for regulated substance inputs, withdrawals, and the amount still remaining in the tank are recorded each operating day.
- (2) The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch.
- (3) The regulated substance inputs are reconciled with delivery receipts by measurement of the tank inventory volume before and after delivery.
- (4) Deliveries are made through a drop tube that extends to within one foot of the tank bottom.
- (5) Product dispensing is metered and recorded within the local standards for meter calibration or an accuracy of 6 cubic inches for every 5 gallons of product withdrawn; and
- (6) The measurement of any water level in the bottom of the tank is made to the nearest one-eighth of an inch at least once a month.

[Note: Practices described in the American Petroleum Institute Publication 1621, "Recommended Practice for Bulk Liquid Stock Control at Retail Outlets," may be used, where applicable, as guidance in meeting the requirements of this paragraph.]

**K.A.R. 28-44-23 (b)(1)** The following language shall be added to 40 CFR 280.43(a) following 40 CFR 280.43(a)(6):

"(7) All underground storage tank systems shall utilize inventory control methods with the following exception. Waste oil storage tanks with capacities of 2000 gallons or less may utilize manual tank gauging in place of inventory control. Waste oil storage tanks using manual tank gauging shall report a suspected release if the following standards are exceeded."

Nominal tank capacity gallons	Weekly standard	Monthly standard
550 or less	10 gallons	5 gallons
551 thru 1000	13 gallons	7 gallons
1001 thru 2000	26 gallons	13 gallons



# DAILY INVENTORY WORKSHEET

FACILITY NAME: \_\_\_\_\_

YOUR NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

<b>TANK IDENTIFICATION</b>					
Type of Fuel					
Tank Size in Gallons					
<b>END STICK INCHES</b>					
<b>AMOUNT PUMPED</b>	9	9	9	9	9
Totalizer Reading					
Totalizer Reading					
Totalizer Reading					
Totalizer Reading					
Totalizer Reading					
Totalizer Reading					
Totalizer Reading					
<b>TODAY'S SUM OF TOTALIZERS</b>					
Previous Day's Sum of Totalizers					
<b>AMOUNT PUMPED TODAY</b>					
<b>DELIVERY RECORD</b>	9	9	9	9	9
Inches of Fuel Before Delivery					
Gallons of Fuel Before Delivery (from tank chart)					
Inches of Fuel After Delivery					
Gallons of Fuel After Delivery (from tank chart)					
<b>GALLONS DELIVERED (STICK)</b> [Gallons "After" ! Gallons "Before"]					
<b>GROSS GALLONS DELIVERED (RECEIPT)</b>					

KDHE Owner #: \_\_\_\_\_ KDHE Facility #: \_\_\_\_\_

# 30-Day INVENTORY RECORD

FACILITY NAME: \_\_\_\_\_ MONTH/YEAR: \_\_\_\_/\_\_\_\_

TANK IDENTIFICATION & TYPE OF FUEL: \_\_\_\_\_

DATE OF WATER CHECK: \_\_\_\_\_ LEVEL OF WATER (INCHES): \_\_\_\_\_

DATE	START STICK INVENTORY (GALLONS)	GALLONS DELIVERED	GALLONS PUMPED	BOOK INVENTORY (GALLONS)	END STICK INVENTORY (INCHES)   (GALLONS)	DAILY OVER (+) OR SHORT (!) ["End" ! "Book"]	INITIALS
1	(+)	(!)	(=)				
2	(+)	(!)	(=)				
3	(+)	(!)	(=)				
4	(+)	(!)	(=)				
5	(+)	(!)	(=)				
6	(+)	(!)	(=)				
7	(+)	(!)	(=)				
8	(+)	(!)	(=)				
9	(+)	(!)	(=)				
10	(+)	(!)	(=)				
11	(+)	(!)	(=)				
12	(+)	(!)	(=)				
13	(+)	(!)	(=)				
14	(+)	(!)	(=)				
15	(+)	(!)	(=)				
16	(+)	(!)	(=)				
17	(+)	(!)	(=)				
18	(+)	(!)	(=)				
19	(+)	(!)	(=)				
20	(+)	(!)	(=)				
21	(+)	(!)	(=)				
22	(+)	(!)	(=)				
23	(+)	(!)	(=)				
24	(+)	(!)	(=)				
25	(+)	(!)	(=)				
26	(+)	(!)	(=)				
27	(+)	(!)	(=)				
28	(+)	(!)	(=)				
29	(+)	(!)	(=)				
30	(+)	(!)	(=)				
31	(+)	(!)	(=)				

TOTAL GALLONS PUMPED >

TOTAL GALLONS OVER OR SHORT >

DROP THE LAST 2 DIGITS from the TOTAL

GALLONS PUMPED number and enter the first numbers on the line below.



Compare these numbers



\*\*\* LEAK CHECK:  + 130 =  gallons

Is "TOTAL GALLONS OVER OR SHORT" LARGER than "LEAK CHECK" result? YES NO (circle one)

If answer is "YES" for 2 MONTHS IN A ROW, notify KDHE as soon as possible.

Call the district office or UST Program Staff in Topeka at 785 296-8061

**KEEP THIS PIECE OF PAPER ON FILE FOR AT LEAST 1 YEAR**

# SAMPLE

## DAILY INVENTORY WORKSHEET

**A** FACILITY NAME: LAST CHANCE #2  
 YOUR NAME: JUAN DOE  
 DATE: 9/22/93

<b>B</b>	<b>TANK IDENTIFICATION</b>	1	2	3	4	
	Type of Fuel	REG UNL	PREM UNL	DIESEL	MID UNL	
	Tank Size in Gallons	6000	6000	6000	10,000	
<b>C</b>	<b>END STICK INCHES</b>	41 $\frac{1}{4}$	58 $\frac{7}{8}$	69	86 $\frac{1}{2}$	
<b>D</b>	<b>AMOUNT PUMPED</b>	↓	↓	↓	↓	↓
	Totalizer Reading	24383	30798	92485	44013	
	Totalizer Reading	55138	11017	70178	38974	
	Totalizer Reading					
	Totalizer Reading					
	Totalizer Reading					
	Totalizer Reading					
	Totalizer Reading					
	Totalizer Reading					
<b>E</b>	<b>TODAY'S SUM OF TOTALIZERS</b>	79521	41815	162663	82487	
<b>F</b>	Previous Day's Sum of Totalizers	78271	40260	161663	82584	
<b>G H</b>	<b>AMOUNT PUMPED TODAY</b>	1250	1555	1000	403	
	<b>DELIVERY RECORD</b>	↓	↓	↓	↓	↓
<b>I</b>	Inches of Fuel Before Delivery	13 $\frac{7}{8}$			49 $\frac{7}{8}$	
<b>K</b>	Gallons of Fuel Before Delivery (from tank chart)	537			5246	
<b>J</b>	Inches of Fuel After Delivery	41 $\frac{1}{4}$			86 $\frac{1}{2}$	
<b>K</b>	Gallons of Fuel After Delivery (from tank chart)	2672			9423	
<b>L</b>	<b>GALLONS DELIVERED (STICK)</b> (Gallons "After" - Gallons "Before")	2135			4177	
<b>M</b>	<b>GROSS GALLONS DELIVERED (RECEIPT)</b>	2100			4200	

# SAMPLE

## MONTHLY INVENTORY RECORD

**N** TANK IDENTIFICATION & TYPE OF FUEL: 4 MIDGRADE UNL

MONTH/YEAR: 9/93

FACILITY NAME: LAST CHANCE #2

DATE OF WATER CHECK: 9/1 LEVEL OF WATER (INCHES): 0 **V**

DATE	<b>O</b> START STICK INVENTORY (GALLONS)	<b>P</b> GALLONS DELIVERED	<b>Q</b> GALLONS PUMPED	<b>R</b> BOOK INVENTORY (GALLONS)	<b>S</b> END STICK INVENTORY (INCHES)   (GALLONS)	<b>T</b> DAILY OVER (+) OR SHORT (-) ["End" - "Book"]	<b>U</b> INITIALS
1	4047 (+)	—	(-) 333 (=)	3714	38 1/4 3690	-24	JD
2	3690 (+)	—	(-) 44 (=)	3646	38 3658	+12	JD
3	3658 (+)	—	(-) 329 (=)	3329	35 3/8 3323	-6	JD
4	3323 (+)	—	(-) 60 (=)	3263	35 3275	+12	JD
5	3275 (+)	—	(-) 145 (=)	3130	33 3/4 3117	-13	JD
6	3117 (+)	—	(-) 238 (=)	2879	31 1/8 2790	-89	JD
7	2790 (+)	6134 (-)	117 (=)	8807	80 8844	+37	JD
8	8844 (+)	—	(-) 127 (=)	8717	78 7/8 8732	+15	JD
9	8732 (+)	—	(-) 182 (=)	8550	77 1/2 8591	+41	JD
10	8591 (+)	—	(-) 205 (=)	8386	75 1/2 8379	-7	JD
11	8379 (+)	—	(-) 204 (=)	8175	73 5/8 8173	-2	JD
12	8173 (+)	—	(-) 166 (=)	8007	72 7991	-16	JD
13	7991 (+)	—	(-) 320 (=)	7671	69 3/4 7730	+59	JD
14	7730 (+)	—	(-) 307 (=)	7423	67 7402	-21	JD
15	7402 (+)	—	(-) 76 (=)	7326	66 1/2 7342	+16	JD
16	7342 (+)	—	(-) 224 (=)	7118	64 1/8 7050	-68	JD
17	7050 (+)	—	(-) 390 (=)	6660	61 6657	-3	JD
18	6657 (+)	—	(-) 296 (=)	6361	58 5/8 6354	-7	JD
19	6354 (+)	—	(-) 78 (=)	6276	58 1/8 6290	+14	JD
20	6290 (+)	—	(-) 424 (=)	5866	54 3/8 5869	+3	JD
21	5869 (+)	—	(-) 205 (=)	5664	53 1/8 5639	-25	JD
22	5639 (+)	4177 (-)	403 (=)	9413	86 1/2 9423	+10	JD
23	9423 (+)	—	(-) 87 (=)	9336	85 1/2 9343	+7	JD
24	9343 (+)	—	(-) 311 (=)	9032	82 9036	+4	JD
25	9036 (+)	—	(-) 239 (=)	8797	79 1/8 8757	-40	JD
26	8757 (+)	—	(-) 256 (=)	8501	76 7/8 8526	+25	JD
27	8526 (+)	—	(-) 264 (=)	8262	74 1/2 8270	+8	JD
28	8270 (+)	—	(-) 263 (=)	8007	72 7991	-16	JD
29	7991 (+)	—	(-) 185 (=)	7806	69 7811	+5	JD
30	7811 (+)	—	(-) 116 (=)	7695	68 7690	-5	JD
31	(+)	(-)	(=)				

**W** TOTAL GALLONS PUMPED > 6594 TOTAL GALLONS OVER OR SHORT > -74 **X**

DROP THE LAST 2 DIGITS from the PUMPED number and enter on the line below

**Y** LEAK CHECK: 65 + 130 = 195 gallons

Is "TOTAL GALLONS OVER OR SHORT" LARGER than "LEAK CHECK" result? YES **NO** (circle one) **Z**

If answer is "YES" for 2 MONTHS IN A ROW, notify regulatory agency as soon as possible.

KEEP THIS PIECE OF PAPER ON FILE FOR AT LEAST 1 YEAR

>>>Copy and post this reminder where employees  
who measure tanks can see it!<<<

## **GET GOOD INVENTORY CONTROL MEASUREMENTS!**

- **Measure each tank every operating day using an Automatic Tank gauge (ATG) or gauge stick**
- **When Sticking, Use gauge sticks that are**
  - ┆ **marked to the  $\frac{1}{8}$  inch**
  - ┆ **not cut off or worn off at the "0" end**
  - ┆ **varnished and not warped**
- **Stick along the same side of the drop tube each time**
- **Use good sticking practices**
  - ┆ **SLOWLY lower stick**
  - ┆ **GENTLY touch stick on tank bottom**
  - ┆ **QUICKLY pull stick out**
- **Measure just before each delivery**
- **Wait at least 5 minutes after delivery, then measure again**
- **Read and record totalizer meters carefully**
- **Check for water at least once a month using your ATG or water-finding paste**